

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 – 23 (canceled).

Claim 24 (currently amended). A light source comprising at least one light emitting diode (LED) assembly, said LED assembly including a base substrate, said base substrate including base solder or stud bumps, a submount substrate mounted on the base substrate, said submount substrate including submount solder or stud bumps, and an LED semiconductor chip mounted on the submount substrate and in electrical contact with the submount solder or stud bumps, said LED semiconductor chip being electrically coupled to the base substrate through electrical vias extending through the submount substrate that are in electrical contact with the base solder or stud bumps and the submount solder or stud bumps;

wherein the at least one LED assembly further includes a phosphor layer deposited over the LED semiconductor chip, said LED semiconductor chip emitting blue light and said phosphor layer converting the blue light to white light; and

~~The light source according to claim 23~~ wherein a light beam cutoff pattern of the LED assembly is printed into the phosphor layer.

Claims 25-34 (canceled).

Claim 35 (currently amended). A light source comprising:

at least one light emitting diode (LED) assembly, said LED assembly including a base substrate, said base substrate including base solder or stud bumps, a submount substrate mounted on the base substrate, said submount substrate including submount solder or stud bumps, and an LED semiconductor chip mounted on the submount substrate and in electrical contact with the submount solder or stud bumps, said LED semiconductor chip being electrically coupled to the base substrate through electrical vias extending through the submount substrate that are in electrical contact with the base solder or stud bumps and the submount solder or stud bumps; and

~~The light source according to claim 33 further comprising~~ a headlight housing, said carrier being pivotally mounted to the headlight housing by an adjuster and a pivot element so as to direct the headlight in two-axis of freedom;

wherein the light source is a vehicle light source, the light source is a vehicle headlight, and the LED assembly is sealed from the environment.

Claim 36 (original). The light source according to claim 35 further comprising a flexible boot, said flexible boot being mounted to the carrier and the headlight housing so as to allow the carrier to be rotated and to maintain the seal integrity.

Claim 37 (original). The light source according to claim 36 wherein the flexible boot is co-molded to the headlight housing and the carrier.

Claim 38 (original). The light source according to claim 36 wherein the flexible boot is co-molded to the headlight housing and a mechanical clip, and wherein the mechanical clip is clipped to the carrier.

Claim 39 (original). The light source according to claim 36 wherein the flexible boot is a rubber boot.

Claims 40-58 (canceled).

Claim 59 (currently amended). A light source comprising at least one light emitting diode (LED) assembly, the LED assembly including an LED semiconductor chip and a substrate, said semiconductor chip being electrically coupled to the substrate, said LED assembly further including a molded primary optic formed over the LED assembly in contact with the substrate so that there is not an air gap between the primary optic and the LED semiconductor chip;

wherein the at least one LED assembly further includes a phosphor layer deposited over the LED semiconductor chip, said LED semiconductor chip emitting blue light and said phosphor layer converting the blue light to white light; and

~~The light source according to claim 58 wherein a light beam cutoff pattern of the LED assembly is printed into the phosphor layer.~~

Claims 60-71 (canceled).

Claim 72 (currently amended). A light source comprising:

at least one light emitting diode (LED) assembly, the LED assembly including an LED semiconductor chip and a substrate, said semiconductor chip being electrically coupled to the substrate, said LED assembly further including a molded primary optic formed over the LED assembly in contact with the substrate so that there is not an air gap between the primary optic and the LED semiconductor chip;

a carrier, said base substrate being mounted to the carrier; and

~~The light source according to claim 71 further comprising a headlight housing, said carrier being pivotally mounted to the headlight housing by an adjuster and a pivot element so as to direct the headlight in two-axis of freedom;~~

wherein the light source is a vehicle headlight and the LED assembly is sealed from the environment.

Claim 73 (original). The light source according to claim 72 further comprising a flexible boot, said flexible boot being mounted to the carrier and the headlight housing so as to allow the carrier to be rotated and to maintain the seal integrity.

Claim 74 (original). The light source according to claim 73 wherein the flexible boot is co-molded to the headlight housing and the carrier.

Claim 75 (original). The light source according to claim 73 wherein the flexible boot is co-molded to the headlight housing and a mechanical clip, and wherein the mechanical clip is clipped to the carrier.

Claim 76 (original). The light source according to claim 73 wherein the flexible boot is a rubber boot.

Claims 77-90 (canceled).

Claim 91 (currently amended). A vehicle headlight comprising at least one headlight unit, said at least one headlight unit including an optical structure, said at least one headlight unit further including a plurality of spaced apart

primary optic lenses optically coupled to a front face of the optical structure,
said at least one headlight unit further including a plurality of light emitting diode
(LED) assemblies, where a single LED assembly is provided for each lens,
wherein each LED assembly emits a beam of light that is focused and directed
by the elongated lens and is collected and directed by the optical structure to
be emitted from the front face of the optical structure as a single beam of light,
wherein each LED assembly in the plurality of LED assemblies provides a
portion of the intensity of the entire light pattern;

wherein each LED assembly includes an LED semiconductor chip that emits
blue light and a phosphor layer that converts the blue light to white light; and

~~The headlight according to claim 90~~ wherein a light beam cutoff pattern of the
LED assembly is printed into the phosphor layer.

Claims 92-95 (canceled).

Claim 96 (currently amended). A vehicle headlight comprising:

at least one headlight unit, said at least one headlight unit including an optical
structure, said at least one headlight unit further including a plurality of spaced
apart primary optic lenses optically coupled to a front face of the optical
structure, said at least one headlight unit further including a plurality of light
emitting diode (LED) assemblies, where a single LED assembly is provided for

each lens, wherein each LED assembly emits a beam of light that is focused and directed by the elongated lens and is collected and directed by the optical structure to be emitted from the front face of the optical structure as a single beam of light, wherein each LED assembly in the plurality of LED assemblies provides a portion of the intensity of the entire light pattern; and

a common carrier, the plurality of LED assemblies being mounted to said carrier;

~~The headlight according to claim 95 further comprising~~ a headlight housing, said carrier being pivotally mounted to the headlight housing by an adjuster and a pivot element to direct the headlight in two degrees of freedom.

Claim 97 (original). The headlight according to claim 96 further comprising a flexible boot, said flexible boot being mounted to the carrier and the headlight housing so as to allow the carrier to be rotated and maintain a headlight seal integrity.

Claim 98 (original). The headlight according to claim 97 wherein the flexible boot is co-molded to the headlight housing and the carrier.

Claim 99 (original). The headlight according to claim 97 wherein the flexible boot is co-molded to the headlight housing and a mechanical clip, and wherein the mechanical clip is clipped to the carrier.

Claim 100 (original). The headlight according to claim 97 wherein the flexible boot is a rubber boot.

Claims 101-122 (canceled).

Claim 123 (currently amended). A vehicle headlight comprising:

at least one headlight unit, said at least one headlight unit including a plurality of light emitting diode (LED) assemblies, where a single LED assembly is provided for each lens, said LED assembly including a base substrate, said base substrate including base solder or stud bumps, a submount substrate mounted on the base substrate, said submount substrate including submount solder or stud bumps, and an LED semiconductor chip mounted on the submount substrate and in electrical contact with the submount solder or stud bumps, said LED semiconductor chip being electrically coupled to the base substrate through electrical vias extending through the submount substrate that are in electrical contact with the substrate solder or stud bumps and the submount solder or stud bumps, wherein each LED assembly emits light that is focused and directed to be emitted as a single beam of light;

a common carrier, the plurality of LED assemblies being mounted to said carrier; and

~~The headlight according to claim 122 further comprising~~ a headlight housing, said carrier being pivotally mounted to the headlight housing by an adjuster and a pivot element to direct the headlight in two degrees of freedom.

Claim 124 (original). The headlight according to claim 123 further comprising a flexible boot, said flexible boot being mounted to the carrier and the headlight housing so as to allow the carrier to be rotated and maintain a headlight seal integrity.

Claim 125 (original). The headlight according to claim 124 wherein the flexible boot is co-molded to the headlight housing and the carrier.

Claim 126 (original). The headlight according to claim 124 wherein the flexible boot is co-molded to the headlight housing and a mechanical clip, and the mechanical clip is clipped to the carrier.

Claim 127 (original). The headlight according to claim 124 wherein the flexible boot is a rubber boot.

Claims 128-135 (canceled).